13. A method for improving time precision in a network including a first clock and a second clock using a packet based network time protocol that is transmitted and received in accordance with a data packet transmission protocol that also includes a error checking code for use in detecting transmission errors in the received data packets, comprising the steps of:

determining a scheduled time of transmission when each packet containing network timing information is to be released for transmission from a respective first or second physical interface to the network,

writing the scheduled time of transmission and the associated error checking code in each outgoing information packets,

releasing each outgoing information packet at the respective physical interface when the first or second clock associated with that interface indicates that the current time is equal, within said predetermined precision, to the respective said scheduled time of transmission;

using the respective other clock to determine, within a predetermined precision, a time of reception when each released information packet is received at the other physical interface to said network;

storing said time of reception in an auxiliary timestamp external to the information packet in a manner that is transparent to said transmission protocol without any updating of said error checking code;

associating each auxiliary time stamp with the respective incoming information packet,

using the time of reception data in the auxiliary timestamps and the scheduled time of transmission data in the information packets to synchronize the first clock to the second clock.

14. The method of claim 13 wherein said network time protocol is an existing time protocol, said transmission protocol is an existing transmission protocol.

15. The method of claim 14, wherein

the arriving packets are sent to a receive buffer after the auxiliary timestamp has been stored.

16. The method of claim 15 wherein no changes are made to physical layer drivers or to any of ISO rules for packet structure, at all network layers.

17. The method of claim 16, wherein

at least one said physical layer is a host physical layer to a network boundary.

18. The method of claim 16, wherein the error check code is a CRC code, and a copy of the CRC code of a particular data packet is included in the associated auxiliary timestamp.

19. An apparatus for reducing the uncertainty in timing on a network comprising:

an auxiliary receive timestamper for associating an auxiliary timestamp to arriving packets before sending the packets to a receive buffer, wherein said auxiliary timestamp is in addition to any existing network protocol timestamp and does not require the recalculation of any existing error checking code before the packets are placed in said receive buffer;

a transmit timestamper adapted to apply a future timestamp for packets to be transmitted at a scheduled future time together with any associated error checking code, and

a network transmitter adapted to hold and release the transmitted packets from a physical interface according to said future timestamps.

20. The apparatus of claim 19 wherein:

the network is adapted to run according to ISO and TCP/IP rules, including packet structure rules including a CRC field; and

a media access controller extender apparatus transparent in operation to existing hardware, said media access controller extender being adapted to supply said auxiliary and future timestamps and utilize said auxiliary and future timestamps to reduce timing uncertainty on a network.

21. The apparatus of claim 20 wherein:

said receive and said transmit timestamps are transmit and receive times of packets at physical interfaces and are supplied after the packet leaves the application layer, or is read before the packet enters the application layer.

22. The apparatus of claim 20, wherein said media access controller extender copies the contents of the CRC field into the associated auxiliary receive timestamp.

23. The apparatus of claim 19 wherein:

said network is an ISO layered network and follows the ISO rules for packets and networks; and

said physical interface is a host physical layer to a boundary of the ISO layered network.

24. The apparatus of claim 19, wherein

said auxiliary timestampers are transparent to an existing network time protocol.